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SMITH HOPEN, PA 180 PINE AVENUE NORTH OLDSMAR, FL 34677			EXAMINER BELLO, AGUSTIN	
			ART UNIT	PAPER NUMBER
			2613	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/604,182

Applicant(s)

KILLINGER, DENNIS K.

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6, 12-27 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) 12-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 18-27 and 30-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 12-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 04/06/07.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Burns (U.S. Patent No. 6,064,502).

Regarding claim 1, Burns teaches at least one optical light source (reference numeral 1 in Figure 1-B) adapted to generate light simultaneously at multiple wavelengths (reference numeral 24 in Figure 2); at least one detector (reference numeral 2 in Figure 1-B) adapted to detect light at multiple wavelengths; different external remote targets and target spatial regions fixed in line-of-sight relation to said optical light source and in line-of-sight relation to said detector (Figure 3); a modulating device (reference numeral 24 in Figure 2) connected in modulating relation to said optical light source; said modulating device adapted to modulate each of said multiple wavelengths so that multiple messages are transmitted simultaneously (Figure 3); said communication device adapted to aim said modulated light from said at least one optical light source at said different multiple external remote targets and target spatial regions to separate

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spatially different communication optical signals from one another (Figure 3), said at least one detector adapted to demodulate (reference numeral 34 in Figure 2) light scattered by said target; said at least one detector including an optical bandpass filter (reference numeral 30 in Figure 2) adapted to pass preselected wavelengths of light and reject wavelengths of light outside of said preselected wavelengths; whereby multiple messages are simultaneously transmitted along multiple wavelengths; and whereby said multiple messages are individually detected by said detector.

Regarding claim 2, Burns teaches the at least one light source is selected from the group consisting of a laser light source and a light-emitting diode (reference numeral 25 in Figure 2).

Regarding claim 3, Burns teaches an enclosure (reference numeral 41 in Figure 3) that houses said at least one optical light source and said detector; said enclosure including at least one wall member; said at least one wall member being said target.

Regarding claims 4, 5, Burns teaches an enclosure (reference numeral 41 in Figure 3) that houses said at least one optical light source, said detector, and said barrier (reference numeral 45 in Figure 3); said enclosure including at least one ceiling/floor member (reference numeral 41 in Figure 3); said at least one ceiling/floor member being said target.

Regarding claim 34, Burns teaches an external remote target consisting of atmospheric aerosols and atmospheric molecules positioned in line-of-sight relation to said optical light source and in line-of-sight relation to said detector (inherent).

Regarding claim 35, Burns teaches said external remote target including a plurality of external remote targets in the form of multiple atmospheric backscatter spatial target regions (inherent).

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Regarding claim 36, Burns teaches a plurality of external remote targets including atmospheric backscatter in non-line-of-sight relation to said detector; said detector adapted to detect multipath backscatter from said multiple backscatter spatial target regions (inherent).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 18, 19, and 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns.

Claims 6, 18, 19, and 24, recite a combination of limitation rejected in claims 1-5. Therefore, claims 6, 18, 19, and 24 are rejected on the same grounds as discussed in the rejection of claims 1-5. However, Burns differs from the claimed invention in that Burns fails to specifically teach that a laser is used as the light source. However, the use of lasers in optical communication systems is well known in the art and Official Notice is given to that effect. One skilled in the art would have been motivated to employ a laser in the system of Burns in order to increase the distance capabilities of the apparatus. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a laser in the system of Burns.

6. Claims 20-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Wilkerson (U.S. Patent No. 5,872,621).

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Regarding claims 20 and 25-27, as noted above Burns teaches each of the limitations relating to transmission and reception of light reflected off of remote targets. However, Burns differs from the claimed invention in that Burns fails to specifically teach the use of a laser adapted to generate a LIDAR beam. However, Wilkerson teaches the use of LIDAR beam in a communication system that functions in a manner analogous to the system of Burns. One skilled in the art would have been motivated to employ a LIDAR beam in the system of Burns in order to detect the speed of airborne particles and molecules (abstract of Wilkerson). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ a LIDAR beam in the system of Burns.

Regarding claim 21, Burns teaches an electrical signal conditioner (reference numeral 22 in Figure 2) disposed in electrical communication between said data transmitting device and said laser, said electrical signal conditioner adapted to condition signals from said data transmitting device.

Regarding claim 22, Burns teaches an electrical signal conditioner (reference numeral 29 in Figure 2) disposed in electrical communication between said optical detector and said data receiving device, said electrical signal conditioner adapted to condition electrical signals from said optical detector.

Regarding claim 23, the combination of references differs from the claimed invention in that it fails to specifically teach an optical bandpass filter between said receiver telescope and said optical detector. However, the use of optical band pass filters is well known in the art, and Official Notice is given to that effect. One skilled in the art would have been motivated to employ an optical bandpass filter in order to prevent unwanted frequency from being converted

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to electrical signals. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ an optical bandpass filter in the device of the combination of references.

7. Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Welch (U.S. Patent No. 5,903,373).

Regarding claims 30 and 31, Burns differs from the claimed invention in that Burns fails to specifically teach that the optical signal is transmitted to a remote external target wherein the backscatter optical signal is detected simultaneously by multiple telescope receivers positioned at different locations. However, Welch teaches that this concept is well known in the art (Figure 8). One skilled in the art would have been motivated to transmit to a remote external target wherein the backscatter optical signal is detected simultaneously by multiple telescope receivers positioned at different locations in order to allow for broadcasting of signals. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to transmit to a remote external target wherein the backscatter optical signal is detected simultaneously by multiple telescope receivers positioned at different locations.

8. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Wilkerson and Welch (U.S. Patent No. 5,903,373).

Regarding claims 32 and 33, the combination of Burns and Wilkerson differs from the claimed invention in that it fails to specifically teach that the optical signal is transmitted to a remote external target wherein the backscatter optical signal is detected simultaneously by multiple telescope receivers positioned at different locations. However, Welch teaches that this concept is well known in the art (Figure 8). One skilled in the art would have been motivated to

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transmit to a remote external target wherein the backscatter optical signal is detected simultaneously by multiple telescope receivers positioned at different locations in order to allow for broadcasting of signals. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to transmit to a remote external target wherein the backscatter optical signal is detected simultaneously by multiple telescope receivers positioned at different locations.

### ***Response to Arguments***

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'A. Bello', is positioned above the printed name and title.

Agustin Bello  
Primary Examiner  
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AB